What Works Clearinghouse

INSTITUTE OF EDUCATION SCIENCES

Children Classified as Having an Emotional Disturbance October 2011

Coping Power

Report Contents

Program Description[1]

Coping Power is based on the earlier *Anger Coping Power* program. It emphasizes social and emotional skills that are needed during the transition to middle school. The program incorporates child and parent components. The child component consists of thirty-four 50-minute group sessions and periodic individual sessions over the course of 15–18 months, although the program can be shortened to fit into a single school year. Lessons focus on goal setting, problem solving, anger management, and peer relationships. The parent component is composed of 16 group sessions and periodic individual meetings. Lessons support the child component of the program and address setting expectations, praise, discipline, managing stress, communication, and child study skills.

Research[2]

Three studies of *Coping Power* that fall within the scope of the Children Classified as Having an Emotional Disturbance review protocol meet What Works Clearinghouse (WWC) evidence standards. The three studies included 650 students who were at high risk for delinquent and/or aggressive behavior from grades 4 and 5 in Alabama and North Carolina. Based on these three studies, the WWC considers the extent of evidence for *Coping Power* on children classified as having an emotional disturbance (or children at risk for classification) to be medium to large for external behavior and small for social outcomes. The three studies that meet WWC evidence standards did not examine the effectiveness of *Coping Power* on children classified with an emotional disturbance in the emotional/internal behavior, reading achievement/literacy, math achievement, school attendance, or other academic performance domains.

Effectiveness

Coping Power was found to have positive effects on external behavior and potentially positive effects on social outcomes for children classified with an emotional disturbance.

Table 1. Summary of findings[3]

Outcome domain	Rating of effectiveness	Improvement index *(percentile points)* Average	Improvement index *(percentile points)* Range	Number of Studies	Number of Students	Extent of evidence
External behavior	Positive effects	+8	−6 to +24 percentile points	3	650[4]	Medium to large
Social outcomes	Potentially positive effects	+6	na	1	332[5]	Small

na = not applicable

Program Information

Background

Coping Power was codeveloped by John Lochman, a professor at the University of Alabama, adjunct professor at the Duke University Medical Center, and director of the Center for Prevention of Youth Behavior Problems, and Karen Wells, a professor at Duke University and director of the Family Studies Clinic. *Coping Power* is distributed by the Coping Power Program. Address: Coping Power Program, Box 870348, The University of Alabama, Tuscaloosa, AL 35487. Web: http://www.copingpower.com. Telephone: (205) 348-3535.

Program details

Coping Power is designed for children approaching the transition to middle school, specifically fourth, fifth, and sixth graders, and is typically delivered to those who are identified by their teachers as aggressive and/or disruptive.

Coping Power's major services involve structured cognitive-behavioral group sessions for selected children and behavioral training groups delivered to their parents. The child component of *Coping Power* consists of 34 group sessions and periodic individual sessions and has been typically delivered in school-based settings. These sessions focus on behavioral and personal goal setting, awareness of feelings and associated physiological arousal, use of coping self-statements, distraction techniques, relaxation methods, organizational/study skills, and refusal skills. This last set of skills deals with peer pressure and neighborhood-based problems. The parent component of *Coping Power* consists of 16 group sessions, periodic home visits, and individual contacts. The parent sessions focus on identification of prosocial and disruptive behavioral targets in children, rewarding appropriate child behaviors, giving effective instructions, establishing age-appropriate rules and expectations for children, applying effective consequences to negative child behavior, and establishing ongoing family communication through weekly family meetings. Parents learn to support the social-cognitive skills children are meant to acquire through *Coping Power*. The group intervention sessions for children and parents are augmented with regularly scheduled, brief individual contacts designed to promote generalization of skills to the children's natural environment.

Staff members who deliver the program participate in a training workshop. Intensive staff training, which is recommended by the developer, includes ongoing consultative supervision and feedback on recorded sessions. The developers recommend a minimum of one consultation per month throughout the first year of program implementation. Feedback on a minimum of eight recorded sessions is required for obtaining "trainer" status.

Cost[6]

The cost of running simultaneous child and parent groups with up to eight child participants and their parents is $733, plus the cost of staff time and training. A basic training workshop for up to 30 participants costs $5,000, plus the trainer's travel (or $1,000 per participant for onsite training). Intensive staff training, which is recommended by the developer, is provided for a fee of $100 per hour.

Research Summary

Twenty-three studies reviewed by the WWC investigated the effects of *Coping Power* on children classified as having an emotional disturbance (or children at risk for classification). Three studies (Lochman et al., 2009; Lochman, Boxmeyer, Powell, Roth, & Windle, 2006; Lochman & Wells, 2004) are randomized controlled trials that meet WWC evidence standards. The remaining 20 studies do not meet WWC eligibility screens or WWC evidence standards. (See references beginning on page 6 for citations for all 23 studies.)

Table 2. Scope of reviewed research

Grade	4 & 5
Delivery method	Small group
Program type	Supplement
Studies reviewed	23
Meets WWC standards	3 studies
Meets WWC standards with reservations	0 studies

Summary of studies meeting WWC evidence standards without reservations

Lochman et al. (2009) randomly assigned 49 counselors from 57 schools to either the *Coping Power* Training + Feedback condition (CP-TF), the *Coping Power* Basic Training condition (CP-BT), or a no-treatment comparison group. Counselors assigned to the CP-TF condition received intensive training, as recommended by the developers. This training included supervision and feedback.[7] Students within each school were selected for participation based on third-grade teachers' ratings of six aggressive behaviors. The 30% most aggressive students across all classrooms were considered potentially eligible for the study. The original sample consisted of 531 students (CP-TF = 168; CP-BT = 183; comparison group = 180 students), and the program was delivered to participants during fourth and fifth grades. The final analysis sample consists of 332 students.[8] The study reported outcomes after two school years of implementation.

Lochman et al. (2006) measured the effectiveness of an abbreviated version of *Coping Power* on a sample of fifth-grade students who were among the 30% most aggressive children in their classrooms. A total of 240 aggressive students were randomized either to receive *Coping Power* (n = 120) or be in a comparison group (n = 120). Outcome data were available for 224 boys, with 112 students in each group. Students in the *Coping Power* group participated in 24 child group sessions led by pairs of researchers. The study reported teacher ratings on child external behavior measured after the intervention.[9]

Lochman and Wells (2004) randomly assigned 183 male students who previously exhibited aggression and disruptive behavior to one of three conditions (Child + Parent components of *Coping Power* = 60; Child-only component of *Coping Power* = 60; or comparison condition = 63). The analysis sample consists of 94 students (Child + Parent components of *Coping Power* = 46; comparison condition = 48.)[10] Students were in grades 4 and 5 when the study began and received 15 months of *Coping Power*. One-year follow-up assessments were collected two summers after the intervention ended, when the students had completed either sixth or seventh grade.[11]

Summary of studies meeting WWC evidence standards with reservations

No studies of *Coping Power* meet WWC evidence standards with reservations.

Effectiveness Summary

The WWC review of interventions for Children Classified as Having an Emotional Disturbance addresses student outcomes in seven domains: external behavior, emotional/internal behavior, social outcomes, reading achievement/literacy, math achievement, school attendance, and other academic performance. The three studies that influence the findings in this report cover two domains: external behavior and social outcomes. The findings below present the authors' estimates and WWC-calculated estimates of the size and statistical significance of the effects of *Coping Power* on children classified as having an emotional disturbance. For a more detailed description of the rating of effectiveness and extent of evidence criteria, see Appendix E.

Summary of effectiveness for the external behavior domain

Lochman et al. (2009) found, and the WWC confirmed, three statistically significant differences between the treatment and comparison groups on the Behavior Assessment System for Children (BASC) Externalizing Composite Teacher Rating Scale, BASC Externalizing Composite Parent Rating Scale, and the National Youth Survey (NYS) Minor Assault Scale.

Lochman et al. (2006) found, and the WWC confirmed, no statistically significant difference between youth assigned to the abbreviated *Coping Power* program and youth in the comparison group on the BASC Externalizing Composite Teacher Rating Scale; furthermore, the effect size for this outcome was not substantively important according to WWC criteria (i.e., at least 0.25 standard deviations).

Lochman and Wells (2004) found a statistically significant difference between treatment and comparison groups on NYS Covert Delinquency, School Behavior Improvement, and Substance Abuse Parent Report. The WWC confirmed the statistically significant difference between treatment and comparison groups on Substance Abuse Parent Report and School Behavior Improvement, and found that the effect for NYS Covert Delinquency was not statistically significant after correcting for multiple comparisons; the effect sizes for all three outcomes were substantively important according to WWC criteria (i.e., at least 0.25 standard deviations). Lochman and Wells (2004) also found, and the WWC confirmed, that there were no statistically significant differences between the treatment and comparison groups on child reports of NYS Overt Delinquency and NYS Substance Abuse.

Thus, for the external behavior domain, two studies with strong designs showed statistically significant positive effects. This results in a rating of positive effects, with a medium to large extent of evidence.

Table 3. Rating of effectiveness and extent of evidence for the external behavior domain

Rating of effectiveness	Criteria met
Positive effects *Strong evidence of a positive effect with no overriding contrary evidence*	The review of *Coping Power* had two studies with strong designs showing statistically significant positive effects and no studies showing statistically significant or substantively important negative effects.
Extent of evidence	**Criteria met**
Medium to large	The review of *Coping Power* had (a) three studies, AND (b) 56[12] schools, AND (c) 650[4] students.

Summary of effectiveness for the social outcomes domain

Lochman et al. (2009) found, and the WWC confirmed, that there were no statistically significant difference between treatment and comparison groups on the BASC Social Composite Parent Rating Scale, but that there was a statistically significant difference between treatment and comparison groups on the BASC Social/Academic Composite Teacher Rating Scale. Thus, for the social outcomes domain, one study with a strong design showed a statistically significant positive effect. This results in a rating of potentially positive effects, with a small extent of evidence.

Table 4. Rating of effectiveness and extent of evidence for the social outcomes domain

Rating of effectiveness	Criteria met
Potentially positive effects *Evidence of a positive effect with no overriding contrary evidence*	The review of *Coping Power* had one study showing a statistically significant positive effect, no studies showing a statistically significant or substantively important negative effect, and no studies showing indeterminate effects.
Extent of evidence	**Criteria met**
Small	The review of *Coping Power* had (a) one study, AND (b) 38[12] schools, AND (c) 332[5] students

References

Meets WWC evidence standards without reservations

Lochman, J. E., Boxmeyer, C., Powell, N., Qu, L., Wells, K., & Windle, M. (2009). Dissemination of the Coping Power program: Importance of intensity of counselor training. *Journal of Consulting and Clinical Psychology, 77*(3), 397–409.

Lochman, J. E., Boxmeyer, C., Powell, N., Roth, D. L., & Windle, M. (2006). Masked intervention effects: Analytic methods for addressing low dosage of intervention. *New Directions for Evaluation, 110*, 19–32.

Lochman, J. E., & Wells, K. C. (2004). The Coping Power program for preadolescent aggressive boys and their parents: Outcome effects at the 1-year follow-up. *Journal of Consulting and Clinical Psychology, 72*(4), 571–578.

Additional source:

Lochman, J. E., & Wells, K. C. (2002). Contextual social-cognitive mediators and child outcome: A test of the theoretical model in the Coping Power program. *Development and Psychopathology, 14*(4), 945–967.

Do not meet WWC evidence standards

Lochman, J. E., & Wells, K. C. (2002). The Coping Power program at the middle-school transition: Universal and indicated prevention effects. *Psychology of Addictive Behaviors, 16*(4, Suppl), S40–S54. The study does not meet WWC evidence standards because it uses a randomized controlled trial design that either did not generate groups using a random process or had nonrandom allocations after random assignment, and the subsequent analytic intervention and comparison groups are not shown to be equivalent.

Additional source:

Lochman, J. E., & Wells, K. C. (2003). Effectiveness of the Coping Power program and of classroom intervention with aggressive children: Outcomes at a 1-year follow-up. *Behavior Therapy, 34*(4), 493–515.

Peterson, M. A., Hamilton, E. B., & Russell, A. D. (2009). Starting well: Facilitating the middle school transition. *Journal of Applied School Psychology, 25*(3), 286–304. The study does not meet WWC evidence standards because it uses a randomized controlled design that either did not generate groups using a random process or had nonrandom allocations after assignment, and the subsequent analytic intervention and comparison groups are not shown to be equivalent.

Ineligible for review by Children Classified as Having an Emotional Disturbance

Boxmeyer, C. L., Lochman, J. E., Powell, N., Yaros, A., & Wojnaroski, M. (2007). A case study of the Coping Power program for angry and aggressive youth. *Journal of Contemporary Psychotherapy, 37*(3), 165–174. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Dyer, R. D. J. (2010). Poder resolver: Adaptation of the Coping Power program, an evidence based treatment for Mexican American youths. *Dissertation Abstracts International, 70*(8-B), 5157. The study is ineligible for review because it does not use a comparison group design or a single-case design.

LeCroy, C. W., & Daley, J. (2005). *Case studies in child, adolescent, and family treatment*. Belmont, CA: Thomson/Brooks/Cole. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Lochman, J. E., Boxmeyer, C. L., & Jackson, M. F. (2007). School-based intervention for youth antisocial behavior—the Coping Power program. In S. W. Evans, M. D. Weist, & Z. N. Serpell (Eds.), *Advances in school-based mental health interventions: Best practices and program models* (Vol. 2, pp. 1–16). Kingston, NJ: CRI. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., Boxmeyer, C. L., Powell, N. P., Barry, T. D., & Pardini, D. A. (2010). Anger control training for aggressive youths. In J. R. Weisz & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (pp. 227–242). New York: Guildford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., Boxmeyer, C., Powell, N. P., & Wells, K. C. (2010). Cognitive behavior therapy for the group-based treatment of oppositional youth. In R. C. Murrihy, A. D. Kidman, & T. H. Ollendick (Eds.), *Clinical handbook of assessing and treating conduct problems in youth* (pp. 221–244). New York: Springer. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., Boxmeyer, C. L., Powell, N. P., Wojnaroski, M., & Yaros, A. (2007). The use of the Coping Power program to treat a 10-year-old girl with disruptive behaviors. *Journal of Clinical Child and Adolescent Psychology, 36*(4), 677–687. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Lochman, J. E., Fitz, G. D. P., Gage, S. M., Kanaly, M. K., Whidby, J. M., Barry, T. D., … McElroy, H. (2001). Effects of a social cognitive intervention for aggressive deaf children: The Coping Power program. *Jadara, 35*(2), 39–61. The study is ineligible for review because it does not examine an intervention implemented in a way that falls within the scope of the review.

Lochman, J. E., Powell, N., Boxmeyer, C. L., & Baden, R. (2010). Dissemination of evidence-based programs in the schools: The Coping Power program. In B. Doll, W. Pfohl, & J. Yoon (Eds.), *Handbook of youth prevention science* (pp. 393–412). New York: Routledge. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., Powell, N. P., Boxmeyer, C. L., & Jimenez-Camargo, L. (2011). Cognitive-behavioral therapy for externalizing disorders in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America, 20*(2), 305–318. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., Powell, N. R., Jackson, M. F., & Czopp, W. (2006). Cognitive-behavioral psychotherapy for conduct disorder: The Coping Power program. In W. M. Nelson III, A. J. Finch Jr., & K. J. Hart (Eds.), *Conduct disorders: A practitioner's guide to comparative treatments* (pp. 177–215). New York: Springer. The study is ineligible for review because it does not use a comparison group design or a single-case design.

Lochman, J. E., Powell, N. R., Whidby, J. M., & Fitzgerald, D. P. (2006). Aggressive children: Cognitive-behavioral assessment and treatment. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures* (pp. 33–81). New York: Guilford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., & Wells, K. C. (1996). A social-cognitive intervention with aggressive children: Prevention effects and contextual implementation issues. In R. Peters & R. J. McMahon (Eds.), *Preventing childhood disorders, substance abuse, and delinquency* (pp. 111–143). Thousand Oaks, CA: Sage Publications. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Lochman, J. E., Wells, K. C., & Murray, M. (2007). The Coping Power program: Preventive intervention at the middle school transition. In P. Tolan, J. Szapocznik, & S. Sambrano (Eds.), *Preventing youth substance abuse: Science-based programs for children and adolescents* (pp. 185–210). Washington, DC: American Psychological Association. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Nelson, W. M., III, & Schultz, J. R. (2009). Managing anger and aggression in students with externalizing behavior problems: Focus on exemplary programs. In M. J. Mayer, J. E. Lochman, & R. Van Acker (Eds.), *Cognitive-behavioral interventions for emotional and behavioral disorders: School-based practice* (pp. 143–170). New York: Guilford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Powell, N. P., Boxmeyer, C. L., Baden, R., Stromeyer, S., Minney, J. A., Mushtaq, A., & Lochman, J. E. (2011). Assessing and treating aggression and conduct problems in schools: Implications from the Coping Power program. *Psychology in the Schools, 48*(3), 233–242. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Russell, A. (2009). Influencing adaptive functioning in school-age children: Implementation and program evaluation of the Coping Power program. *Dissertation Abstracts International, 69*(8-B), 5053. The study is ineligible for review because it does not use a sample aligned with the protocol—the sample includes less than 50% students at-risk for emotional disturbance or classified as emotionally disturbed.

Smith, S. W., Graber, J. A., & Daunic, A. P. (2009). Review of research and research-to-practice issues. In M. J. Mayer, J. E. Lochman, & R. Van Acker (Eds.), *Cognitive-behavioral interventions for emotional and behavioral disorders: School-based practice* (pp. 111–142). New York: Guilford Press. The study is ineligible for review because it is a secondary analysis of the effectiveness of an intervention, such as a meta-analysis or research literature review.

Appendix A.1: Research details for Lochman et al., 2009

Lochman, J. E., Boxmeyer, C., Powell, N., Qu, L., Wells, K., & Windle, M. (2009). Dissemination of the Coping Power program: Importance of intensity of counselor training. *Journal of Consulting and Clinical Psychology, 77(*3), 397–409.

Table A1. Summary of findings

Meets WWC evidence standards

Outcome domain	Sample size[13]	Study findings	
		Average improvement index *(percentile points)*	Statistically significant
External behavior	332	+7	Yes
Social outcomes	332	+6[14]	Yes

Setting

The schools came from five districts in northern Alabama (33 schools were located in Birmingham, 11 in Tuscaloosa or Tuscaloosa County, 5 in Bessemer City, and 8 in Shelby County). The set of schools is diverse and covers both urban and suburban areas.

Study sample[15]

A total of 49 counselors from 57 schools and five school districts were assigned to the *Coping Power* Training + Feedback condition (CP-TF), the *Coping Power* Basic Training condition (CP-BT), or a no-treatment comparison group. Nineteen schools were assigned to each condition. The sample consisted of two cohorts of students, with 13 schools in the first cohort and 44 schools in the second cohort. Randomization to study condition took place at the school counselor level and was stratified by district; eight counselors worked with two schools each, so these schools were assigned as pairs. Students were selected for participation based on third-grade teachers' ratings of six aggressive behaviors in the spring semester. The 30% most aggressive students across all classrooms, excluding the top 2%, were considered potentially eligible for the study. A total of 1,435 students met these criteria. Within each school's pool of eligible students, families were randomly contacted until a maximum of 10 families agreed to participate. The same process was used in both treatment and comparison schools. The initial sample consisted of 531 "high-risk" students (CP-TF = 168; CP-BT = 183; comparison group = 180) who were included in the study based on the Teacher Report of Reactive and Proactive Aggression (Dodge et al. 1997).[16] The analysis sample consists of 332 students.[13] The program was delivered to participants during fourth and fifth grade. A majority of the sample was made up of African American (84%) and male (65%) students.

Intervention group

Coping Power had a child and parent component and was implemented by school staff. Children received thirty-four 50- to 60-minute group sessions during school time, and parents received sixteen 90-minute group sessions. The intervention lasted over two school years (grades 4 and 5). Children and parents respectively attended 11 and 5 sessions in the fourth-grade year and the remaining sessions in the fifth-grade year. Children also received monthly individual sessions. Parents met in groups of 10 or fewer or in parent dyads. Fidelity of program implementation was assessed by researchers through eight variables evaluating program delivery and counselor engagement. Seven of the measures were derived from audiotapes of child and parent sessions; parents attended less than 25% of scheduled parent sessions.

Comparison group

Usual counseling services were provided in these schools. The comparison group was led by 17 counselors, with a mean of 9.4 years of experience. Fourteen staff members were certified as school counselors, 10 had a master's degree, and 6 held a Ph.D. The report indicates that these counselors were comparable to counselors in the other two study conditions with regard to education and experience.

Outcomes and measurement[17]

This study included parent and teacher ratings on the Behavior Assessment System for Children (BASC), including the externalizing and social/academic composites. The National Youth Survey (NYS) Minor Assault Scale also was used. The study measured outcomes before and after two school years of implementation. For a more detailed description of these outcome measures, see Appendix B.

Support for implementation[18]

By nature of the study, counselors in the CP-TF condition received more intensive training than counselors in the CP-BT condition. The CP-BT counselors attended three workshop training days in the fall before the intervention and two-hour monthly sessions throughout the study. The CP-TF counselors received these components plus individualized technical assistance for specific problems via email or over the phone; trainers also reviewed the rate of session completion and gave feedback to counselors in the CP-TF condition. Counselors in the CP-TF condition received the version of *Coping Power* that is recommended by the developers; this more intensive training reflects how the program has evolved for application in real-life, community settings outside of a research setting. Training to all counselors was provided by four of the research authors, who were doctoral-level clinical psychologists.

Appendix A.2: Research details for Lochman et al., 2006

Lochman, J. E., Boxmeyer, C., Powell, N., Roth, D. L., & Windle, M. (2006). Masked intervention effects: Analytic methods for addressing low dosage of intervention. *New Directions for Evaluation, 110*, 19–32.

Table A2. Summary of findings

Meets WWC evidence standards

Outcome domain	Sample size	Study findings	
		Average improvement index *(percentile points)*	Statistically significant
External behavior	224 students	+8	No

Setting[19]

The study took place across seven elementary schools in Alabama. The student intervention was delivered by pairs of researchers through weekly small-group sessions in the school building. The parent component was delivered through sessions in the school building in the afternoons or evenings.

Study sample

The sample consisted of fifth-grade students who were in the top 30% of grade 4 students based on teacher ratings of aggressive behavior. A total of 240 aggressive boys (64%) and girls (36%) were randomized to receive the intervention (n = 120) or be in a comparison group (n = 120). Outcome data were available for 224 boys, with 112 students in each group. The gender and race/ethnicity distribution and family composition were similar across participants in the intervention and comparison conditions. Sixty-nine percent of the children self-identified as African American, 30% as Caucasian, and 1% as another race or ethnicity. Forty percent of the children lived with a single mother.

Intervention group

This study used an abbreviated version of the *Coping Power* program. Students participated in 24 child group sessions led by pairs of researchers; each group included five to six students. Sessions focused on coping and problem-solving skills, as well as strategies for enhancing social relationships and resisting peer pressure. The children had an overall attendance rate of 93%. Parents of students in the intervention group were invited to take part in parent sessions held in the school two times each month. These groups focused on behavior management skills and improving family problem solving, communication, and cohesion. The groups included parents and primary caregivers of the target children. Thirty percent of parents did not attend any of the 10 sessions offered.

Comparison group

The comparison group did not participate in *Coping Power*. Comparison children received services typically offered by their schools. The parents of these students did not participate in any parent sessions.

Outcomes and measurement

This study used teacher ratings on the Behavior Assessment System for Children (BASC) external behavior scale, conducted before and after the intervention. For a more detailed description of these outcome measures, see Appendix B.

Support for implementation

Pairs of researchers implemented the intervention. No information is provided about training.

Appendix A.3: Research details for Lochman and Wells (2004)

Lochman, J. E., & Wells, K. C. (2004). The Coping Power program for preadolescent boys and their parents: Outcome effects at the 1-year follow-up. *Journal of Consulting and Clinical Psychology, 72*(4), 571–578.

Table A3. Summary of findings

Meets WWC evidence standards

Outcome domain	Sample size[20]	Study findings	
		Average improvement index *(percentile points)*	Statistically significant
External behavior	94 students	+9	Yes

Setting[21]

The sample was selected from 11 elementary schools in North Carolina.

Study sample

A total of 1,578 boys in fourth- and fifth-grade classrooms across two cohorts were screened for aggressive behavior. Screening was based on teacher ratings of physical and verbal aggression and disruptive behavior. The initial pool of 546 boys scored in the top 22% of teachers' ratings. Parents were then contacted for consent to administer two additional screens using the Teacher Report Form and the Child Behavior Checklist. Researchers stopped collecting consent after they gathered a sample of 183 students who met the minimum requirements for the study. This sample was then randomly assigned to three conditions (child and parent components of *Coping Power* = 60; child-only component = 60; comparison condition = 63). The analysis sample consisted of 94 students (child and parent components of *Coping Power* = 46; comparison condition = 48).[10] Fifty-five percent of the sample was in grade 4, and the remaining boys were in grade 5. Sixty-one percent of the children were African American, and 38% were Caucasian. The mean income levels for the families were between $25,000 and $30,000 per year.

Intervention group

Coping Power is designed to have both a child and a parent component. One study group received both the child and parent components, and the other group received only the child component of *Coping Power*. The child component for both groups consisted of 40- to 60-minute group sessions for four to six children. Groups were led by a school guidance counselor and a grant-funded family-school program specialist. There were 8 sessions in year 1 and 25 sessions in year 2. Boys also had an average of 1.4 individual meetings per month with staff to reinforce and support their goal-setting efforts and use of intervention procedures. The parent component consisted of 16 parent group sessions offered over a 15-month period and was led by two grant-funded staff persons at the school. Attendance for student group sessions was 83%, and attendance in the parent groups was 49%. Staff members were required to deliver all intervention lessons but were allowed to spend additional time on certain sections.

Comparison group

The comparison group did not participate in *Coping Power*. Comparison children received services typically offered by their schools. The parents of these students did not participate in any parent sessions.

Outcomes and measurement[22]

The study measured outcomes using the National Youth Survey (NYS) Covert Delinquency, Overt Delinquency, and Substance Abuse subscales, as well as parent reports of child substance abuse and teacher reports of school behavior improvement. One-year follow-up assessments were collected two summers after the intervention ended. For a more detailed description of these outcome measures, see Appendix B.

Support for implementation

All grant-funded staff and school counselors received a 10-hour training program as well as weekly scheduled supervision of their intervention work. They received intervention manuals that indicated session goals and specific activities. Intervention staff rated the level of accomplishment of each objective at the end of each intervention session, and these rating sheets were reviewed by the supervisor during the weekly sessions.

Appendix B: Outcome measures for each domain

External behavior	
BASC Externalizing Composite Parent Rating Scale	The Behavior Assessment System for Children (BASC) Parent Rating Scale evaluates parents' ratings of child behavior with regard to aggression, conduct problems, hyperactivity, and social skills. The externalizing composite is based on the Aggression, Hyperactivity, and Conduct Problems subscales (as cited in Lochman et al., 2009).
BASC Externalizing Composite Teacher Rating Scale	The BASC Teacher Rating Scale evaluates teachers' ratings of child aggression, conduct problems, hyperactivity, and social skills. The externalizing composite is based on the Aggression, Hyperactivity, and Conduct Problems subscales (as cited in Lochman et al., 2009; Lochman et al., 2006).
NYS Covert Delinquency	This scale is one of 13 subscales from the National Youth Survey (NYS) questionnaire, which gathers self-report information on substance use and delinquent behaviors. The full delinquency measure includes 40 items representing offenses in the Uniform Crime Reports. Items are clustered into minor and felony assault, minor and felony theft, robbery, fraud, and destruction of property. The authors turned these variables into a binary scale indicating if they occurred during the year prior to the study. Covert Delinquency is a subscale that includes minor and felony theft, fraud, and destruction of property (as cited in Lochman & Wells, 2004).
NYS Minor Assault Scale	This scale is one of 13 subscales from the NYS questionnaire, which gathers self-report information on substance use and delinquent behaviors. The Minor Assault Scale includes three items on hitting or threatening to hit a parent, school staff, or another student. Scores on the scale range from 0 to 3 (as cited in Lochman et al., 2009).
NYS Overt Delinquency	This scale is one of 13 subscales from the NYS questionnaire, which gathers self-report information on substance use and delinquent behaviors. The full delinquency measure includes 40 items representing offenses in the Uniform Crime Reports. Items are clustered into minor and felony assault, minor and felony theft, robbery, fraud, and destruction of property. The authors turned these variables into a binary scale indicating if they occurred during the year prior to the study. Overt Delinquency is based on self-reported minor assault, felony assault, and robbery (as cited in Lochman & Wells, 2004).
NYS Substance Abuse Child Report	This scale is one of 13 subscales from the NYS questionnaire, which gathers self-report information on substance use and delinquent behaviors. Children reported their use of alcohol and marijuana during the year prior to the study. Items were converted to a binary variable (use or no use) (as cited in Lochman & Wells, 2004).
School Behavior Improvement	This six-point scale was completed by teachers and ranges from "has gotten worse" to "shows improvement." The items assess problem solving, anger management, and behavioral problems (as cited in Lochman & Wells, 2004).
Substance Abuse Parent Report	This measure includes four items that assess parent reports on the frequency (six levels, ranging from "never" to "four to seven times per week") and amount (five levels ranging from "none" to "large") of alcohol and marijuana use among children. Because the frequency and amount indicators were on different scales, standardized scales were created for each of the items and were summed to create an overall substance-abuse score (as cited in Lochman & Wells, 2004).
Social outcomes	
BASC Social Composite Parent Rating Scale	The BASC Parent Rating Scale evaluates parents' reports of child aggression, conduct problems, hyperactivity, and social skills. This social composite scale is designed to capture parents' reports of children's social skills in both the home and community (as cited in Lochman et al., 2009).
BASC Social/Academic Composite Teacher Rating Scale	The BASC Teacher Rating Scale evaluates teachers' reports of child aggression, conduct problems, hyperactivity, and social skills. This social/academic scale is designed to capture student social skills, leadership, adaptation, academic skills, and study skills. Social skills are defined as the skills needed to interact well with peers and adults in and out of school settings (as cited in Lochman et al., 2009).

Appendix C.1: Findings included in the rating for the external behavior domain

Outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			p-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Lochman et al., 2009[a]								
BASC Externalizing Composite Teacher Rating Scale	Grades 4 and 5, CP-TF group	302	26.4 (18.3)	32.0 (19.2)	5.6	0.24	+9	0.01
BASC Externalizing Composite Parent Rating Scale	Grades 4 and 5, CP-TF group	332	19.6 (11.5)	20.2 (13.4)	0.6	0.11	+4	0.05
NYS Minor Assault Scale	Grades 4 and 5, CP-TF group	328	0.6 (0.9)	0.8 (1.1)	0.2	0.18	+7	0.03
Domain average for external behavior (Lochman et al., 2009)						**0.18**	**+7**	**Statistically significant**
Lochman et al. 2006[b]								
BASC Externalizing Composite Teacher Rating Scale	Grade 5	224	36.2 (19.6)	33.6 (19.0)	3.7	0.19	+8	0.06
Domain average for external behavior (Lochman et al., 2006)						**0.19**	**+8**	**Not statistically significant**
Lochman & Wells, 2004[c]								
NYS Covert Delinquency	Grades 4 and 5, Child + Parent group	88	0.4 (0.5)	0.6 (0.7)	0.2	0.28[d]	+11	0.04
NYS Overt Delinquency	Grades 4 and 5, Child + Parent group	88	0.6 (0.5)	0.6 (0.5)	–0.0	–0.02	–1	0.92
NYS Substance Abuse Child Report	Grades 4 and 5, Child + Parent group	87	0.2 (0.4)	0.2 (0.3)	–0.1	–0.15	–6	0.49
School Behavior Improvement	Grades 4 and 5, Child + Parent group	94	2.8 (1.5)	2.3 (1.4)	0.5	0.34	+13	0.01
Substance Abuse Parent Report	Grades 4 and 5, Child + Parent group	85	–0.1 (0.4)	0.4 (0.9)	0.4	0.64	+24	0.01
Domain average for external behavior (Lochman & Wells, 2004)						**0.22**	**+9**	**Statistically significant**
Domain average for external behavior across all studies						**0.19**	**+8**	**na**

Table Notes: This appendix reports findings considered for the effectiveness rating and the average improvement indices for the external behavior domain. Positive differences and effect sizes favor the intervention group; negative differences and effect sizes favor the comparison group. Signs were reversed on the mean difference, effect size, and improvement index for all outcomes from Lochman et al. (2009); Lochman et al. (2006); and the NYS Covert Delinquency, NYS Overt Delinquency, NYS Substance Abuse, and Substance Abuse Parent Report outcomes from Lochman and Wells (2004). This was done to demonstrate that the treatment group was favored when negative differences were reported (to clarify, lower scores on these measures indicated fewer problems). The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if that student is given the intervention. The improvement index is an alternate

presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention. The WWC-computed average effect size is a simple average rounded to two decimal places; the average improvement index is calculated from the average effect size. The statistical significance of a study's domain average was determined by the WWC; a study is characterized as having a statistically significant positive effect when univariate statistical tests are reported for each outcome measure, the effect for at least one measure within the domain is positive and statistically significant, and no effects are negative and statistically significant. BASC = Behavior Assessment System for Children; NYS = National Youth Survey; CP-TF = *Coping Power* with a training program for school counselors that includes ongoing support throughout the intervention period; na = not applicable.

[a] Comparisons between children in the CP-TF treatment condition and children in the comparison group are presented for Lochman et al. (2009). Findings from the comparison between the other treatment condition (*Coping Power* with basic training for counselors, or CP-BT) and the comparison group from Lochman et al. (2009) are not included in these ratings but are reported in Appendix D.1. Lochman et al. (2009) used hierarchical linear modeling (HLM), which allowed them to control for baseline scores of the dependent variables and account for clustering at the counselor level. To report effect sizes, authors standardized continuous variables (z-scores) and assigned values to dummy-coded treatment conditions; therefore, regression coefficients can be interpreted as a standardized effect size. A correction for multiple comparisons was needed but did not affect significance levels. The p-values presented here were reported in the original study.

[b] In the case of Lochman et al. (2006), the effect size was calculated by dividing the OLS regression coefficient reported in the paper by the pooled, unadjusted posttest standard deviations provided by the author. No corrections for clustering or multiple comparisons were needed. The p-values were reported in the original study.

[c] Comparisons between children in the Child + Parent *Coping Power* treatment condition and children in the comparison group are presented for Lochman and Wells (2004). Findings from the comparison between the Child-only component of *Coping Power* and the comparison group from Lochman and Wells (2004) are not included in these ratings but are reported in Appendix D.1. Lochman and Wells' (2004) initial analysis examined the main effect of intervention (Child + Parent and Child-only groups combined); if a significant main effect for the intervention was found, then two planned comparisons were conducted, contrasting the Child + Parent group with the comparison condition, and the Child-only group with the comparison condition. Because effect sizes for the contrasts between the Child + Parent group and comparison group were not calculated when the main effect of the intervention was not significant, the WWC calculated effect sizes for overt delinquency and NYS child-reported substance abuse using means, standard deviations, and sample sizes provided in the paper. The *Coping Power* group means on the NYS outcomes represent difference-in-differences adjusted means not reported in the original study. The difference-in-differences adjustment subtracts baseline differences between the study groups from the post-intervention differences between the groups. The *Coping Power* group mean is the sum of this difference-in-differences value and the comparison group mean. The p-values for NYS Covert Delinquency, School Behavior Improvement, and Substance Abuse Parent Report were reported in the original study. The p-values for NYS Overt Delinquency and NYS Substance Abuse Child Report were computed by the WWC. A correction for multiple comparisons was needed and resulted in significance levels that differ from those in the original study. Due to the multiple comparisons adjustment, the p-value of 0.04 for NYS Covert Delinquency was higher than the critical p-value for statistical significance; therefore, the WWC does not find the result to be statistically significant.

[d] This effect size was provided directly by the authors; the effect size reported in Lochman and Wells (2004) was incorrect.

Appendix C.2: Findings included in the rating for the social outcomes domain

Outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			p-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Lochman et al., 2009[a]								
BASC Social/Academic Composite Teacher Rating Scale	Grades 4 and 5	302	49.5 (21.6)	43.9 (19.0)	5.6	0.15	6	0.01
BASC Social Composite Parent Rating Scale	Grades 4 and 5	332	55.0 (15.5)	54.2 (17.1)	0.8	nr	na	0.65
Domain average for social outcomes across one study						**na**	**na**	**Statistically significant**

Table Notes: This appendix reports findings considered for the effectiveness rating and the average improvement indices for the social outcomes domain. Positive results for mean difference, effect size, and improvement index favor the intervention group; negative results favor the comparison group. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if that student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention. The WWC did not compute an average effect size or improvement index for Lochman et al. (2009) or for the social outcomes domain since one of the effect sizes was not reported. The statistical significance of the study's domain average was determined by the WWC; the study is characterized as having a statistically significant positive effect because univariate statistical tests are reported for each outcome measure, the effect for at least one measure within the domain is positive and statistically significant, and no effects are negative and statistically significant. BASC = Behavior Assessment System for Children; CP-TF = *Coping Power* with a training program for school counselors that includes ongoing support throughout the intervention period; nr = not reported; na = not applicable.

[a] Findings from the comparison between the other treatment condition (*Coping Power* with basic training for counselors, or CP-BT) and the comparison group from Lochman et al. (2009) are not included in these ratings but are reported in Appendix D.2. Lochman et al. (2009) used hierarchical linear modeling (HLM), which allowed them to control for baseline scores of the dependent variables and account for clustering at the counselor level. To report effect sizes, authors standardized continuous variables (z-scores) and assigned values to dummy-coded treatment conditions; therefore, regression coefficients can be interpreted as a standardized effect size. Lochman et al. (2009) did not report effect sizes for findings that were not statistically significant. A correction for multiple comparisons was needed but did not affect significance levels. The p-values presented here were reported in the original study.

Appendix D.1: Summary of other treatment group findings for the external behavior domain

Outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			p-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Lochman et al., 2009[a]								
BASC Externalizing Composite Teacher Rating Scale	Grades 4 and 5, CP-BT group	311	31.8 (20.3)	32.0 (19.2)	0.2	nr	na	0.52
BASC Externalizing Composite Parent Rating Scale	Grades 4 and 5, CP-BT group	340	20.6 (10.6)	20.2 (13.4)	–0.4	nr	na	0.26
NYS Minor Assault Scale	Grades 4 and 5, CP-BT group	337	0.9 (1.1)	0.8 (1.1)	–0.1	nr	na	0.70
Lochman & Wells (2004)[b]								
NYS Covert Delinquency	Grades 4 and 5, Child-only group	84	0.7 (0.6)	0.6 (0.7)	–0.1	–0.09	–4	0.69
NYS Overt Delinquency	Grades 4 and 5, Child-only group	84	0.6 (0.5)	0.6 (0.5)	–0.1	–0.14	–6	0.53
NYS Substance Abuse Child Report	Grades 4 and 5, Child-only group	84	0.1 (0.4)	0.2 (0.3)	–0.0	–0.12	–5	0.58
School Behavior Improvement	Grades 4 and 5, Child-only group	92	2.9 (1.5)	2.3 (1.4)	0.6	0.42	16	0.01
Substance Abuse Parent Report	Grades 4 and 5, Child-only group	80	0.3 (0.9)	0.4 (0.9)	0.1	0.07	3	0.77

Table Notes: This appendix presents comparisons between children in the *Coping Power*–Basic Training (CP-BT) treatment group and the comparison group from Lochman et al. (2009) on measures that fall in the external behavior domain. It also presents comparisons between children who received the Child-only version of *Coping Power* and children in the comparison group from Lochman and Wells (2004) on measures that fall in the external behavior domain. These are ancillary comparisons for the purposes of this review. Positive results for mean difference, effect size, and improvement index favor the intervention group; negative results favor the comparison group. Signs were reversed on the mean difference, effect size, and improvement index for all outcomes from Lochman et al. (2009) and for the NYS Covert Delinquency, NYS Overt Delinquency, NYS Substance Abuse Child Report, and Substance Abuse Parent Report outcomes from Lochman and Wells (2004) to demonstrate that the treatment group was favored when negative differences were reported. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if that student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention. BASC = Behavior Assessment System for Children; NYS = National Youth Survey; CP-BT = *Coping Power* with basic training for counselors; nr = not reported; na = not applicable.

[a] Comparisons between children in the CP-BT treatment condition and children in the comparison group are presented for Lochman et al. (2009). Comparisons from Lochman et al. (2009) between children in the comparison group and children in the *Coping Power* treatment group that included a recommended training program for school counselors with ongoing support throughout the intervention period (CP-TF) were used for rating purposes and are presented in Appendix C.1. Lochman et al. (2009) used hierarchical linear modeling (HLM), which allowed them to control for baseline scores of the dependent variables and account for clustering at the counselor level. To report effect sizes, authors standardized continuous variables (z-scores) and assigned values to dummy-coded treatment conditions; therefore, regression coefficients can be interpreted as a standardized effect size. Lochman et al. (2009) did not report effect sizes for findings that were not statistically significant. A correction for multiple comparisons was needed but did not affect significance levels. The p-values presented here were reported in the original study.

[b] Comparisons between children in the Child-only *Coping Power* treatment condition and children in the comparison group are presented for Lochman and Wells (2004). Comparisons from Lochman and Wells (2004) between children in the comparison group and children who received the version of *Coping Power* with both child and parent components were used for rating purposes and are presented in Appendix C.1. Lochman and Wells' (2004) initial analysis examined the main effect of the intervention (Child + Parent and Child-only groups combined); if a significant main effect for the intervention was found, then two planned comparisons were conducted, contrasting the Child + Parent group with the comparison condition, and the Child-only group with the comparison condition. Because effect sizes for the contrasts between the Child-only group and comparison group were not calculated when the main effect of the intervention was not significant, the WWC calculated effect sizes for NYS Covert Delinquency, NYS Overt Delinquency, NYS Substance Abuse Child Report, and Substance Abuse Parent Report using means, standard deviations, and sample sizes provided in the paper. The *Coping Power* group means for NYS outcomes represent difference-in-differences adjusted means not reported in the original study. The difference-in-differences adjustment subtracts baseline differences between the study groups from the post-intervention differences between the groups. The *Coping Power* group mean is the sum of this difference-in-differences value and the comparison group mean. The p-values for School Behavior Improvement were reported in the original study. The p-values for NYS Covert Delinquency, NYS Overt Delinquency, NYS Substance Abuse Child Report, and Substance Abuse Parent Report were computed by the WWC. A correction for multiple comparisons was needed but did not affect significance levels.

Appendix D.2: Summary of other treatment group findings for the social outcomes domain

Outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			p-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Lochman et al., 2009[a]								
BASC Social/Academic Composite Teacher Rating Scale	Grades 4 and 5	311	48.0 (21.3)	43.9 (19.0)	4.1	nr	na	0.06
BASC Social Composite Parent Rating Scale	Grades 4 and 5	340	56.5 (16.8)	54.2 (17.1)	2.3	nr	na	0.21

Table Notes: This appendix presents comparisons between children in the *Coping Power*–Basic Training (CP-BT) treatment group and the comparison group from Lochman et al. (2009) on measures that fall in the social outcomes domain. These are ancillary comparisons for the purposes of this review. Positive results for mean difference, effect size, and improvement index favor the intervention group; negative results favor the comparison group. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if that student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention. BASC = Behavior Assessment System for Children; CP-BT = *Coping Power* with basic training for counselors; nr = not reported; na = not applicable.

[a] Comparisons between children in the *Coping Power*–Basic Training (CP-BT) treatment group and the comparison group are presented from Lochman et al. (2009). Comparisons between children in the comparison group and children in the *Coping Power* treatment group that included a recommended training program for school counselors with ongoing support throughout the intervention period (CP-TF) were used for rating purposes and are presented in Appendix C.2. Lochman et al. (2009) used hierarchical linear modeling (HLM), which allowed them to control for baseline scores of the dependent variables and account for clustering at the counselor level. To report effect sizes, authors standardized continuous variables (z-scores) and assigned values to dummy-coded treatment conditions; therefore, regression coefficients can be interpreted as a standardized effect size. Lochman et al. (2009) did not report effect sizes for findings that were not statistically significant. A correction for multiple comparisons was needed but did not affect significance levels. The p-values presented here were reported in the original study.

Appendix E: Glossary of terms and criteria for study rating, effectiveness rating, and extent of evidence

Attrition Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.

Clustering adjustment If treatment assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.

Design The design of a study is the method by which intervention and comparison groups were assigned.

Domain A domain is a group of closely related outcomes.

Effect size The effect size is a standardized measure of the magnitude of an effect that is comparable across studies and outcomes.

Eligibility A study is eligible for review if it falls within the scope of the review protocol and uses a causal design (RCT or QED).

Equivalence A demonstration that the analysis sample groups are similar on observed characteristics defined in the review area protocol.

Extent of evidence An indication of how much evidence supports the findings. The criteria for the extent of evidence levels are given in Table E3.

Improvement index Along a percentile distribution of students, the improvement index represents the gain or loss of the average student due to the intervention. As the average student starts at the 50th percentile, the measure ranges from –50 to +50.

Multiple comparison adjustment When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.

Quasi-experimental design (QED) A quasi-experimental design (QED) is a research design in which subjects are assigned to treatment and comparison groups through a process that is not random.

Randomized controlled trial (RCT) A randomized controlled trial (RCT) is an experiment in which investigators randomly assign eligible participants into treatment and comparison groups.

Rating of effectiveness The WWC rates the effects of an intervention in each domain based on the quality of the research design and the magnitude, statistical significance, and consistency in findings. The criteria for the ratings of effectiveness are given in Table E2.

Standard deviation

The standard deviation across all students in a group shows how dispersed the outcomes are. A measure with a small standard deviation would indicate that participants had more similar outcomes than a measure with a large standard deviation.

Statistical significance

Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% ($p < 0.05$).

Substantively important

A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.

Please see the WWC Procedures and Standards Handbook (version 2.0) for additional details.

Table E1. Criteria used to determine the rating of a study

Study rating	Criteria
Meets evidence standards	A study that provides strong evidence for an intervention's effectiveness, such as a well-implemented RCT.
Meets evidence standards with reservations	A study that provides weaker evidence for an intervention's effectiveness, such as a QED or an RCT with high attrition that has established equivalence of the analytic samples.

Table E2. Criteria used to determine the rating of effectiveness for an intervention

Rating of effectiveness	Criteria
Positive effects	Two or more studies show statistically significant positive effects, at least one of which meets WWC evidence standards for a strong design, AND No studies show statistically significant or substantively important negative effects.
Potentially positive effects	At least one study shows a statistically significant or substantively important positive effect, AND No studies show a statistically significant or substantively important negative effect AND fewer or the same number of studies show indeterminate effects than show statistically significant or substantively important positive effects.
Mixed effects	At least one study shows a statistically significant or substantively important positive effect AND at least one study shows a statistically significant or substantively important negative effect, but no more such studies than the number showing a statistically significant or substantively important positive effect, OR At least one study shows a statistically significant or substantively important effect AND more studies show an indeterminate effect than show a statistically significant or substantively important effect.
Potentially negative effects	One study shows a statistically significant or substantively important negative effect and no studies show a statistically significant or substantively important positive effect, OR Two or more studies show statistically significant or substantively important negative effects, at least one study shows a statistically significant or substantively important positive effect, and more studies show statistically significant or substantively important negative effects than show statistically significant or substantively important positive effects.
Negative effects	Two or more studies show statistically significant negative effects, at least one of which meets WWC evidence standards for a strong design, AND No studies show statistically significant or substantively important positive effects.
No discernible effects	None of the studies shows a statistically significant or substantively important effect, either positive or negative.

Table E3. Criteria used to determine the extent of evidence for an intervention

Extent of evidence	Criteria
Medium to large	The domain includes more than one study, AND The domain includes more than one school, AND The domain findings are based on a total sample size of at least 350 students, OR, assuming 25 students in a class, a total of at least 14 classrooms across studies.
Small	The domain includes only one study, OR The domain includes only one school, OR The domain findings are based on a total sample size of fewer than 350 students, AND, assuming 25 students in a class, a total of fewer than 14 classrooms across studies.

Endnotes

[1] The descriptive information for this program was obtained from publicly available sources: the program's website (http://www.copingpower.com, downloaded November 2010), http://psychiatry.duke.edu/modules/psych_staff/index.php?id=5, and http://psychology.ua.edu. The WWC requests developers to review the program description sections for accuracy from their perspective. The program description was provided to the developer in November 2010. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review. The literature search reflects documents publicly available by August 2011.

[2] The studies in this report were reviewed using WWC Evidence Standards, Version 2.0, as described in protocol Version 2.0. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.

[3] For criteria used in the determination of the rating of effectiveness and extent of evidence, see Appendix E. These improvement index numbers show the average and range of student-level improvement indices for all findings across the studies. The three studies that meet WWC evidence standards did not examine the effectiveness of *Coping Power* on children classified with an emotional disturbance in the emotional/internal behavior, reading achievement/literacy, math achievement, school attendance, or other academic performance domains.

[4] For Lochman and Wells (2004), this sample size represents the number of students in the comparison group and the Child + Parent *Coping Power* treatment group; this number also presumes that the students who had data on the student and parent reports are a subset of those who had data on school behavior improvement. For Lochman et al. (2009), this sample size represents the number of students in the comparison group and the *Coping Power* treatment group that included a training program for school counselors with ongoing support throughout the intervention period (CP-TF); this number also presumes that students who had data on the BASC Externalizing Composite Teacher Rating Scale and NYS Minor Assault Scale are a subset of those who had data on the BASC Externalizing Composite Parent Rating Scale. Otherwise, the number of students could be larger than 650.

[5] For Lochman et al. (2009), this sample size represents the number of students in the comparison group and the *Coping Power* treatment group that included a training program for school counselors with ongoing support throughout the intervention period (CP-TF); this number also presumes that students who had data on the BASC Social/Academic Composite Teacher Rating Scale are a subset of those who had data on the BASC Social Composite Parent Rating Scale. Otherwise, the number of students could be larger than 332.

[6] Cost information was obtained directly from the developers.

[7] Lochman et al. (2009) reported separate contrasts between the comparison condition and both of the treatment conditions (CP-BT and CP-TF). By the nature of the study, counselors in the CP-TF condition received more intensive training than counselors in the CP-BT condition. Program information obtained directly from the developers indicates that the recommended version of *Coping Power* includes the more intensive counselor training; thus, comparisons between children in the CP-TF condition and children in the comparison group are presented in Appendices C.1 and C.2 and form the basis of the intervention rating. The comparisons between children in the CP-BT condition and children in the comparison group are presented in Appendices D.1 and D.2 and do not contribute to the intervention rating.

[8] For Lochman et al. (2009), this sample size represents the number of students in the comparison group and the *Coping Power* treatment group that included a training program for school counselors with ongoing support throughout the intervention period (CP-TF). The final sample sizes for each of the conditions differ by outcome measure.

[9] A key purpose of this work was to examine alternative methods to "intent-to-treat analyses" when estimating treatment effects. Although examining *Coping Power* intervention effects was perhaps a secondary purpose, the information could still be used to inform this report.

[10] Lochman and Wells (2004) reported separate contrasts between the comparison condition and both of the treatment conditions (Child + Parent *Coping Power* and Child-only *Coping Power*). *Coping Power* is designed to have both a child and a parent component; thus, the contrast between children who received the full version of *Coping Power* (Child + Parent) and children in the comparison group is presented in Appendix C.1 and forms the basis of the intervention rating. The contrast between children who received the Child-only component of *Coping Power* and children in the comparison group is presented in Appendix D.1 and does not contribute to the intervention rating.

[11] In an earlier report on the same sample of students, Lochman and Wells (2002) also measured students during the summer right after the intervention ended using an (1) angry attributional measure, (2) outcome expectation questionnaire, (3) internal and external locus of control measure, and (4) object representation inventory (which was meant to capture the students' descriptions of their parents and best friends). These outcomes are not presented in this report because they do not fall under a domain specified in the protocol and because differences between treatment and comparison groups were not presented in the article.

[12] For Lochman et al. (2009), a total of 57 schools were randomly assigned to conditions. This number includes 38 schools that were part of the comparison group or the *Coping Power* treatment group that included a training program for school counselors with ongoing support throughout the intervention period (CP-TF).

[13] The reported sample sizes for Lochman et al. (2009) represent the number of students in the comparison group and the *Coping Power* treatment group that included a training program for school counselors with ongoing support throughout the intervention period (CP-TF). The reported student sample size for external behavior presumes that students who had data on the BASC Externalizing Composite Teacher Rating Scale and NYS Minor Assault Scale are a subset of those who had data on the BASC Externalizing Composite Parent Rating Scale. The reported student sample size for social outcomes presumes that students who had data on the BASC Social/Academic Composite Teacher Rating Scale are a subset of those who had data on the BASC Social Composite Parent Rating Scale. Otherwise, the number of students for both domains could be larger than 332.

[14] The average improvement index for the social outcomes domain is based only on the BASC Social/Academic Composite Teacher Rating Scale used in Lochman et al. (2009); the authors did not report an effect size for the BASC Social/Academic Composite Parent Rating Scale because the contrast between the treatment and comparison groups was not significant. Thus, an improvement index for this variable cannot be calculated.

[15] The author provided additional information stating that some schools did not have 10 children within the risk range, so they had fewer than 10 participating families. The author also stated that families did not know treatment status when they gave consent to participate in the study. The final sample sizes for each of the conditions differ by outcome measure.

[16] Dodge, K. A., Lochman, J. E., Harnish, J. D., Bates, J. E., & Pettit, G. S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. *Journal of Abnormal Psychology*, 106, 37–51.

[17] Lochman et al. (2009) also measured students' outcome expectations and parents' use of inconsistent discipline; these outcomes are not presented in this report because they do not fall under a domain specified in the protocol.

[18] Lochman et al. (2009) reported separate contrasts between the comparison condition and both of the treatment conditions (CP-BT and CP-TF). Program information obtained directly from the developers indicates that the recommended version of *Coping Power* includes the more intensive counselor training; thus, contrasts between children in the CP-TF condition and children in the comparison group are presented in Appendices C.1 and C.2 and form the basis of the intervention rating. The contrasts between children in the CP-BT condition and children in the comparison group are presented in Appendices D.1 and D.2 and do not contribute to the intervention rating.

[19] The geographic location of the study was determined via an author query.

[20] For Lochman and Wells (2004), this sample size represents the number of students in the comparison group and the Child + Parent *Coping Power* treatment group; this number also presumes that the students who had data on the student and parent reports are a subset of those who had data on school behavior improvement.

[21] The geographic location of the study was determined via an author query.

[22] In an earlier report on the same sample of students, Lochman and Wells (2002) also measured the same sample of students during the summer right after the intervention ended using an (1) angry attributional measure, (2) outcome expectation questionnaire, (3) internal and external locus of control measure, and (4) object representation inventory (which was meant to capture students' descriptions of their parents and best friends). These outcomes are not presented in this report because they do not fall under a domain specified in the protocol and because differences between treatment and comparison groups were not presented in the article.

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